

# PROGRAMME

Tuesday 3rd Aug 2010

## SESSION 1 FUNCTIONAL NANO-IMAGING

Chair: Motohiro Takeda (Tohoku University)

- 14:30-14:45 **Quantitative Analysis of Amyloid Beta Deposition in the Brain of Alzheimer's Disease Patients using PET and [<sup>11</sup>C]BF-227 and [<sup>18</sup>F]FACT**  
Manabu Tashiro (*Division of Cyclotron Nuclear Medicine, Cyclotron and Radioisotope Center, Tohoku University*)
- 14:45-15:00 **Imaging Amyloid Deposits using [<sup>18</sup>F]FACT-PET for Early Diagnosis of Alzheimer's Disease**  
He Shao (*Department of Pharmacology, Graduate School of Medicine, Tohoku University*)
- 15:00-15:15 **Age-related Changes on Properties of Structural Brain Networks in Healthy Individuals**  
Kai Wu (*Department of Nuclear Medicine and Radiology, Institute of Development, Aging and Cancer (IDAC), Tohoku University*)
- 15:15-15:30 **Quantitative Analysis of Donepezil Binding to Acetylcholinesterase using PET and [5-<sup>11</sup>C-methoxy]donepezil**  
Kotaro Hiraoka (*Division of Cyclotron Nuclear Medicine, Cyclotron and Radioisotope Center, Tohoku University*)
- 15:30-15:45 **Measurement of Histamine Release Change in Living Human Brain Associated with Stress and Circadian Rhythm**  
Katsuhiko Shibuya (*Departments of Pharmacology, Graduate School of Medicine, Tohoku University*)
- 15:45-16:00 **Scientific Evaluation on Effects of Chiropractic Treatment, a Type of Manual Therapy, using Magnetic Resonance Imaging (MRI) and Positron Emission Tomography (PET)**  
Takeshi Ogura (*Division of Cyclotron Nuclear Medicine, Cyclotron and Radioisotope Center, Tohoku University*)
- 16:00-16:30 Coffee Break

## SESSION 2 NANO-ONCOLOGY

Chair: Matsuhiko Nishizawa (Tohoku University)

- 16:30-17:00 KEYNOTE LECTURE 1  
**Precise Sentinel Node Imaging by Fluorescent Nanoparticles in Laparoscopic Surgery**  
Motohiro Takeda (*Department of Nano-Medical Science, Graduate School of Medicine, Tohoku University*)
- 17:00-17:15 **Development of a New Tracer for Cancer Imaging with Positron Emission Tomography: [<sup>18</sup>F] 2-Deoxy-2-Fluoro-D-Mannose**  
Hiroshi Fukuda (*Department of Nuclear Medicine and Radiology, Institute of Development, Aging and Cancer (IDAC), Tohoku University*)
- 17:15-17:30 **Regulation of BRCA1/BARD1 Expression after DNA Damage**  
Emiko Maseki (*Department of Molecular Immunology, Institute of Development, Aging and Cancer (IDAC), Tohoku University*)
- 17:30-17:45 **A Novel BARD1-interacting Protein Functions at Cell Cycle Regulation.**  
Ayako Matsuzawa (*Department of Molecular Immunology, Institute of Development, Aging and Cancer (IDAC), Tohoku University*)
- 17:45-18:00 **Demonstration of the Thoracic Duct using MDCT and MRI in Patients with Esophageal Cancer.**  
Kei Takase (*Department of Diagnostic Radiology, Graduate School of Medicine, Tohoku University*)
- 19:00- Banquet

Wednesday 4th Aug 2010

### SESSION 3 NANO-THERAPEUTICS

Chair: Hiroshi Wada (Tohoku University)

- 9:00-9:30      KEYNOTE LECTURE 2  
**Microfluidic Biological Fuel Cells: Automatic Series-connection and Relay Systems**  
Matsuhiko Nishizawa (*Department of Bioengineering and Robotics, Graduate School of Engineering, Tohoku University*)
- 9:30-9:45      **Development of a Micro Fluidic Device to Separate Cancer Cells from Blood**  
Tatsuya Tanaka (*Department of Bioengineering and Robotics, Graduate School of Engineering, Tohoku University*)
- 9:45-10:00      **Effects of Lamb Wave in Therapeutic Ultrasound Transducer by Vibration Analysis**  
Kenji Otsu (*Department of Biomedical Engineering, Graduate School of Biomedical Engineering, Tohoku University*)
- 10:00-10:15      **Development of Retinal Prosthesis Module for Fully Implantable Retinal Prosthesis**  
Kangwook Lee (*New Industry Creation Hatchery Center (NICHe), Tohoku University*)
- 10:15-10:30      **Effects of Animal Assisted Therapy on Central Nervous System Function in Human: a PET Study.**  
Mehedi Masud (*Division of Cyclotron Nuclear Medicine, Cyclotron and Radioisotope Center, Tohoku University*)
- 10:30-11:00      Coffee Break

### SESSION 4 NANOBIOMECHANICS

Chair: Hiroshi Fukuda (Tohoku University)

- 11:30-12:00      KEYNOTE LECTURE 3  
**Effect of Spatial Gradient of Shear Stress on Morphological Responses of Endothelial Cells to Flow**  
Naoya Sakamoto (*Department of Bioengineering and Robotics, Graduate School of Engineering, Tohoku University*)
- 12:00-12:15      **Recovery by Salicylate of the Plasma Membrane Expression of Prestin Mutants**  
Hiroshi Wada (*Department of Bioengineering and Robotics, Graduate School of Engineering, Tohoku University*)
- 12:15-12:30      **Acoustic Impedance Evaluation of Thermally Denatured and Non-denatured Biological Tissues**  
Takashi Shishitani (*Department of Electrical and Communication Engineering, Graduate School of Engineering, Tohoku University*)
- 12:30-12:45      **Analysis of Swallowing Motion Based on Videofluorography**  
Shunichi Ishida (*Department of Bioengineering and Robotics, Graduate School of Engineering, Tohoku University*)
- 12:45-13:00      **Effect of Measurement Error on Ultrasonic-Measurement-Integrated Simulation of Blood Flow in an Aortic Aneurysm**  
Kenichi Funamoto (*Institute of Fluid Science, Tohoku University*)